

I Claim:

1. A method of creating a linearity map, comprising the steps of:
 - (i) touching a display device at a plurality of predetermined locations defined by a calibration grid corresponding to the display device, wherein the calibration grid is non-uniform, and the calibration grid comprises a first area of a first calibration density and a second area of a second calibration density different from said first calibration density;
 - (ii) detecting in a digitizer coupled to the display device, coordinates for each touched predetermined location; and
 - (iii) recording each predetermined location's screen coordinates and corresponding detected digitizer coordinates.
2. The method of claim 1, wherein the calibration grid is displayed on the display device.
3. The method of claim 1, wherein the information recorded in step (iii) is recorded in an array.
4. The method of claim 3, wherein the array is two-dimensional, and each array element corresponds to an intersection of the calibration grid.
5. The method of claim 1, wherein the calibration grid is non-uniform along both its X-axis and Y-axis.
6. A method of creating a linearity map, comprising the steps of:
 - (i) touching a display device at a plurality of predetermined locations;
 - (ii) detecting on a digitizer, coordinates for each touched predetermined location; and
 - (iii) recording each predetermined location's screen coordinates and corresponding detected digitizer coordinates,

wherein a calibration grid displayed on the display device coupled to the digitizer defines the predetermined locations, and

wherein the calibration grid is non-uniform, and comprises a first area of a first density and a second area of a second density.

7. The method of claim 6, wherein the first area corresponds to an area of higher distortion within a data processing device, and the second area corresponds to an area of lower distortion within the data processing device.

8. The method of claim 6, wherein the information recorded in step (iii) is recorded in a non-linear array.

9. The method of claim 6, wherein the calibration grid is non-uniform along both its X-axis and Y-axis.

10. A method of creating a linearity map, comprising the steps of:

- (i) touching a display device at a plurality of predetermined locations defined by a calibration grid corresponding to the display device, wherein the calibration grid is non-uniform, and the calibration grid comprises a first area of a first calibration density and a second area of a second calibration density different from said first calibration density;
- (ii) detecting in a digitizer coupled to the display device, coordinates for each touched predetermined location; and
- (iii) recording each predetermined location's screen coordinates and corresponding detected digitizer coordinates,

wherein the first area corresponds to an area of higher distortion within a data processing device, and the second area corresponds to an area of lower distortion within the data processing device.

11. The method of claim 10, wherein the calibration grid is displayed on the display device.

12. The method of claim 10, wherein the information recorded in step (iii) is recorded in an array.

13. The method of claim 12, wherein the array is two-dimensional, and each array element corresponds to an intersection of the calibration grid.

14. The method of claim 10, wherein the information recorded in step (iii) is recorded in a non-linear array.

15. The method of claim 10, wherein the calibration grid is non-uniform along both its X-axis and Y-axis

16. A computer readable medium storing a data structure of a calibration map for use with a stylus input system, said data structure comprising:

an array of a plurality of input points, each input point corresponding to a physically identified position on a display device coupled to a digitizer that receives input via a stylus, and each input point storing corresponding detected input position coordinates of a detected digitizer position when the physically identified position corresponding to the input point is identified by the stylus;

wherein said array of points is non-uniform, and has a first area of a first calibration density and a second area of a second calibration density different from said first calibration density.

17. The computer readable medium of claim 16, wherein the first area corresponds to an area of higher distortion caused by a component within a data processing device housing the display device and the digitizer.

18. The computer readable medium of claim 16, wherein the first area corresponds to an area of higher distortion within a data processing device, and the second area corresponds to an area of lower distortion within the data processing device.

19. The computer readable medium of claim 16, wherein the calibration grid is non-uniform along both its X-axis and Y-axis